

Memorandum

Date: November 10, 2021

To: Matthew J. Ohl, United States Environmental Protection Agency (EPA)

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From: Julie Konzuk and Gary Wealthall, Geosyntec Consultants, Inc.

Subject: **Response to September 27, 2021 Comments from EPA on the ECC Site Bio-recirculation Pre-Design Investigation Work Plan**
Enviro-Chem (ECC) Superfund Site, Indiana
TR0485F

Comments on the *Bio-recirculation Pre-Design Investigation Work Plan* (Work Plan, Geosyntec, 2021) to complete pre-design investigations to support design of a bio-recirculation system to treat impacted groundwater within the Upper Sand and Gravel Unit on the Enviro-Chem (ECC) Superfund Site (or Site) were received from the Environmental Protection Agency (EPA) on September 27, 2021. A call to discuss the comments with EPA was held on September 29, 2021. This memorandum formalizes the outcome of the discussion and provides a response to the EPA comments. The table below provides a summary of the received comments, the relevant section in the report if applicable, and our response.

EPA provided authorization to proceed with the investigation upon revising the Work Plan. Accompanying this memorandum is the updated Work Plan (Revision 1) that incorporates the additional feedback received by EPA. At this time, we anticipate that field work will proceed in December 2021.

| Comment Number | Section, Page or Figure # | EPA Comment | Response |
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| 1) | General comment | A conservative tracer should be introduced when conducting the injection tests. The arrival of the tracer, presumably after startup of the system, would provide verification of flow paths and rough travel times. | As discussed during our September 29, 2021 call, we are intending to undertake the conservative tracer testing upon startup of the system and thus are not intending to incorporate tracer testing into the pre-design investigation. If completed during the investigation, there will only be a short period of time for injection of the tracer, and it will be difficult to observe breakthrough of such a small volume of tracer. By incorporating the tracer testing into the system startup, we can amend larger quantities of tracer, which will support improved detection. Additionally, the tracer test results will be more representative of groundwater travel times under operation of the recirculation system. |
| 2) | General comment | The sampling method for the microbial analysis needs to specify how it will be obtained under anaerobic conditions. | A standard operating procedures (SOP) outline has been provided in Appendix A in the revised report. |
| 3) | General comment | The Quality Assurance Project Plan (QAPP) should be reviewed and updated as necessary. | An update of the QAPP is in progress and will be completed prior to initiation of the field work. |
| 4) | Section 1.1, first paragraph, first sentence | Given one of the purposes of the work plan is to characterize potential deeper sources of contamination, include sampling at former sump locations. | As discussed during our call on September 29, 2021, only one historical sump location was identified on the ECC Site. As described in the 1996 Revised Remedial Action Report (RAA), a 20-foot square by 12-foot deep sump was installed by EPA in the southeastern corner of the concrete pad. Prior to excavating the concrete pad and subsoils, the lower portions of the ECC Sump were sealed using pressure injection grouting and the upper portion of the sump was excavated during excavation of the subslab soils. Given the remedial work that was undertaken, it was agreed that there was little merit to investigating a grouted sump and instead, a second cored location within the cooling pond footprint was proposed. The second coring location has been added to the Work Plan (see Figure 2). |
| 5) | Section 1.1, second paragraph, first sentence | Add “for further development” after the word “selected”. | This has been added as requested. |

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| 6) | Section 3.2, first paragraph, second sentence | Remove duplicate phrase “of a minimum”. | The duplicate phrase has been removed. |